# ● PRINTER RUSH ●
## (PTO ASSISTANCE)

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|---|---|---|---|---|---|
| **Application :** | 10/684,424 | **Examiner :** | Huynh | **GAU :** | 2818 |
| **From:** | DP | **Location:** | (IDE) FMF FDC | **Date:** | 12/5/2005 |

Tracking #: EFM 10/684,424 Week Date: 8/15/2005

| DOC CODE | DOC DATE | MISCELLANEOUS |
|---|---|---|
| ☐ 1449 | | ☐ Continuing Data |
| ☐ IDS | | ☐ Foreign Priority |
| ☐ CLM | | ☐ Document Legibility |
| ☐ IIFW | | ☐ Fees |
| ☐ SRFW | | ☐ Other |
| ☐ DRW | | |
| ☐ OATH | | |
| ☐ 312 | | |
| ☒ SPEC | 7/25/2005 | |

[RUSH] **MESSAGE:** Amendment to the Specification: In the Abstract, Replace the original Abstract with the Amended Abstract, but there is no Abstract on the sperate sheet. to Amend., Please provide.

Thanks.

[XRUSH] **RESPONSE:**

See misc comm

Done

**INITIALS:**

NOTE: This form will be included as part of the official USPTO record, with the Response document coded as XRUSH.

REV 10/04

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To U.S. Patent and Trademark Office

Fax no. 703-308-6642 Phone no. 703-746-6830

From Mitchell W. Shapiro Phone no. 703.610.8652

Date January 19, 2006 Time

Your Ref.: 10/684,424;
File no. Our Ref.: XA-9945 Pages including cover 6

Message



XA-9945

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Tomoyuki ISHII et al. Conf. No.: 3924

Appln. No.: 10/684,424 Group Art Unit: 2818

Filed: October 15, 2003 Examiner: A. Huynh

For: SEMICONDUCTOR MEMORY DEVICE

* * *

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In response to the Notice (copy enclosed) mailed December 20, 2005, the amended abstract is transmitted herewith. Also transmitted herewith, in case is needed, is a marked-up version of the original abstract showing the amendments.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the

filing of this paper and has not been requested separately, such extension is hereby requested.

Respectfully submitted,

By: _____
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January 19, 2006

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on the date shown below.

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Serial Number
10684424

Date Mailed
12/20/05

# NOTICE TO FILE CORRECTED APPLICATION PAPERS

## *Notice of Allowance Mailed*

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given 30 days from the mail date of this Notice within which to correct the informalities indicated below. A failure to reply will result in the application being ABANDONED. This period for reply is NOT extendable under 37 CFR 1.136 (a) or (b).

- Amended abstract is missing from application. Fax missing information to number below.

**APPLICANT MUST SUPPLY MISSING INFORMATION WITHIN 30 DAYS OF THE MAIL DATE OF THIS NOTICE.**

A copy of this notice MUST be returned with the reply. Please address response to Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Rori Burch
USPTO
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ABSTRACT OF THE DISCLOSURE

To realize a semiconductor memory device with reduced cell-to-cell variation in writing characteristics a semiconductor memory has a source region and a drain region, which are formed parallel to each other, and an assist electrode which is between and parallel to the source and drain regions without overlapping, so that at the time of writing, the assist electrode is used as an assist electrode for hot electrons to be injected at the source side and at the time of reading, an inversion layer formed under the assist electrode is used as the source region or the drain region.

ABSTRACT OF THE DISCLOSURE

~~Flash memory is rapidly decreasing in price. There is a demand for a new memory system that permits size reduction and suits multiple value memory. A flash memory of AND type suitable for multiple value memory with multiple level threshold values can be made small in area if the inversion layer is utilized as the wiring, however, it suffers the disadvantage of greatly varying in writing characteristics from cell to cell. Another promising method of realizing multiple value memory is to change the storage locations. This method, however, poses a problem with disturbance at the time of operation. The present invention provides one way to.~~ To realize a semiconductor memory device with reduced cell-to-cell variation in writing characteristics, ~~The~~ a semiconductor memory has a source region and a drain region, which are formed parallel to each other, and an assist electrode which is between and parallel to the source and drain regions without overlapping, so that ~~it uses,~~ at the time of writing, the assist electrode is used as ~~the~~ an assist electrode for hot electrons to be injected at the source side and ~~it uses,~~ at the time of reading, ~~the~~ an inversion layer formed under the assist electrode is used as the source region or the drain region.